EPA EDIR# E989 Received: 11/29/2012

## **CATERPILLAR®**

Caterpillar Inc. P.O. Box 600 Mossville, Illinois 61552

September 25, 2012

Mr. Justin Greuel
Center Director, Diesel Engine Compliance Center
U.S. Environmental Protection Agency
1310 L. Street, N.W. – 6<sup>th</sup> Floor
Washington, DC 20005

Non-Road Engine Emissions Defect Information Report

Dear Mr. Greuel:

Pursuant to 40 CFR § 1068.501, Caterpillar Inc. has determined that a defect reporting threshold has been reached on certain C13 and C15 Non-Road engines due to a CRS nozzle heater failure. The affected engines are from MY2011, engine families BCPXL12.5HPA and BCPXL15.2HPA

An EDIR is attached, which provides information concerning the issue and the manner in which it will be corrected.

If you have any questions or require additional information, please call.

Sincerely,

Mark A. Rein

Manager, Emissions Conformance and Systems Development

Large Power Systems Division (MOS 11)

Caterpillar Inc.

Telephone: (309) 578-7989

Fax: (309) 578-6939 Rein Mark A@cat.com

cc: Ms. A. Hebert - ARB

**NON-CONFIDENTIAL** 

Date: September 25, 2012

## EMISSIONS DEFECT INFORMATION REPORT

1) Manufacturer's corporate name and a person to contact regarding this defect:

Caterpillar Inc.

Mark A. Rein

Manager, Emissions Conformance and Systems Development

Telephone: (309) 578-7989

Fax: (309) 578-6939 Rein\_Mark\_A@cat.com

2) Description of the defect, including a summary of any engineering analyses and associated data, if available:

Caterpillar has discovered that the nozzle heater on the auxiliary regeneration device that is used to regenerate the diesel particulate filter may fail. If this occurs the fuel nozzle may become restrictive over time and prevent the regeneration device from burning the particulate matter out of the filter. The heater is an electrical device that will fail if external contaminants breach the internal components of the heater causing a short circuit. After the failure the regeneration device will still perform adequately for roughly 100 hours before regenerations are compromised and the Malfunction Indicator Light (MIL) is illuminated. During this entire time operation of the machine is not affected.

3) Description of the engine/equipment that have the defect.

Engine Family	<u>Model</u>	Ratings Affected	Production Dates
BCPXL12.5HPA	C13	All	01Jan2011 - 31Dec2011
BCPXL15.2HPA	C15	All	01Jan2011 - 31Dec2011

4i) Number and percentage of engines known or estimated to have the defect and an explanation of the means by which this number was determined:

The following number of engines is known to be affected by this defect based on the analysis of warranty claims and return parts:

Model Year	Engine Family	Number of Engines	Defect Percentage
2011	BCPXL12.5HPA	45	2.9 %
2011	BCPXL15.2HPA	19	2.0 %

4ii) Describe any statistical methods used to determine the number of affected engines/equipment:

No statistical methods or tools were used.

The filing of a Defect Information Report pursuant to EPA regulations is not conclusive as to the applicability of the Production and Performance Warranties provided by Section 207(a) and 207(b) of the Clean Air Act, as amended, or Section 43204 of the California Health and Safety Code.

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5i) An estimate of the defect's impact on emissions, with an explanation of how you calculated this estimate.

The emissions impact is expected to be negligible as failure of the Aftertreatment Regeneration Device (ARD) would result in improper ignition of the Caterpillar Regeneration System causing the Malfunction Indicator Light (MIL) to illuminate prompting the operator to seek service. If the operator were to ignore the MIL, this defect would ultimately result in derate of the engine.

5ii) Available summary of any emissions data demonstrating the impact of the defect:

No emissions data was collected.

6) A description of your plan for addressing the defect or an explanation of your reasons for not believing the defects must be addressed.

Caterpillar will replace the defective parts upon failure within the warranty period. The heater supplier is redesigning the component to address the defect responsible for this issue.

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